



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-85B BYPASS RATIO: 8.4  
 UNIQUE ID NUMBER: 9GE122 PRESSURE RATIO ( $\pi_{00}$ ): 38.4  
 COMBUSTOR: PEC  
 ENGINE TYPE: TF RATED THRUST ( $F_{00}$ ) (kN): 388.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	5.5	48.1	74.6	2.2
AS % OF ORIGINAL LIMIT	27.9	40.7	63.9	13.3
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			79.8	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			89.1	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			98.5	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			111.5	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	3.182	0.04	0.32	46.77	1.7
CLIMB OUT	85	2.2	2.591	0.03	0.32	38.49	0.8
APPROACH	30	4.0	0.851	0.06	1.79	15.56	1.4
IDLE	7	26.0	0.292	2.96	32.26	5.25	1.2
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1135	1379	15214	24985	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				3.6	39.2	64.3	1.7
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				0.3	1.2	0.5	0.5
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				3.34-3.92	38.33-40.55	63.8-64.88	1.23-2.16

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT All POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT All POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-98.7
TEMPERATURE (K)	277.2-281.3
ABS HUMIDITY (kg/kg)	0.0015-0.0043

### FUEL

SPEC	Jet A-1
H/C	
AROM (%)	15-16

MANUFACTURER: General Electric Company  
 TEST ORGANIZATION: General Electric Peebles Test Operation  
 TEST LOCATION: Site 6A  
 TEST DATES: 30/11/2007-08/12/2007

### REMARKS

- GE Aviation Report R2007AB851
- Engine serial number 900-505/1
- Turbomachinery incorporating 2D aero
- Performance Enhanced Combustor (PEC)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)